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Palmetto AVIATION

VOLUME 36, NUMBER 5

Published by S.C. Aeronautics Commission

May, 1985

Boys Home air show to feature USAF Thunderbirds



The Thunderbirds

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The 18th annual Boys Home of the South Air show, featuring the U.S. Air Force Thunderbirds, will be held June 1st and 2nd at the Donaldson Center Industrial Airpark in Greenville.

The show, billed as the largest non-military event in the southeast, is expected to attract 100,000 persons each day.

Dozens of aircraft—from the latest military fighters to ultralights— will be on display during the show. Included will be the Navy F-18 and F-14, Air Force F-16 and F-15, C-130 and 141 transport aircraft and many other helicopters, attack jets and trainers. There will also be ground equipment displays from the S.C. National Guard and concession and souvenir stands. *continued page 7*

Commission to sponsor Piedmont radar class

The South Carolina Aeronautics Commission will sponsor a weather avoidance radar training class for general aviation pilots Wednesday, May 22 at the Carolina Inn in Columbia.

Presented by John A. DeWitt of the Piedmont Airlines Training Department, the six-hour course is an in-depth study of thunderstorms and airborne weather avoidance radar. The course covers the need for radar, the dynamics of a thunderstorm and radar operating principles and applications.

Whether you are a corporate pilot with the newest color radar, are perhaps thinking of adding radar to your aircraft or just want to learn more about thunderstorms, this course



will help you understand more about storms and how to avoid them.

Experienced pilots with thousands of hours have praised the course. Said one, "It straightened out a lot of misconceptions that I have had for years about radar."

John DeWitt is an avionics instructor with Piedmont Airlines. He has over 12 years experience in avionics with Piedmont. Prior to joining Piedmont, he served in a maintenance capacity with the U.S. Air Force. DeWitt has worked and trained exten-

sively throughout the developmental stages of the Airborne Weather Avoidance Radar program for general aviation pilots with the National Severe Storms Laboratory, Bendix, United Airlines, and AOPA.

The course fee is \$25 and includes all costs, including lunch and coffee breaks. Registration forms have been mailed to ATR and commercial pilots with instrument ratings. However, the course is open to all general aviation pilots. If you would like to attend the course and did not receive a registration form, contact Jim Holliman, manager, Staff Development and Training, S.C. Budget and Control Board, 300 Gervais St., Columbia, SC 29201. Telephone, 758-2103. ✈



PALMETTO AVIATION is an official publication of the South Carolina Aeronautics Commission. It is designed to inform members of the aviation community, and others interested in aviation, of local developments in aviation and aviation facilities and to keep readers abreast of national and international trends in aviation.

The Aeronautics Commission is a state agency created in 1935 by the S.C. General Assembly to foster and promote air commerce within the state.

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John Tate, longtime employee, dies of cancer

John Tate, an Anderson Native and 34-year employee of the Aeronautics Commission, died April 9 of cancer. He was 59.

At the time of his death, Tate was trades supervisor, overseeing grass cutting and

airport maintenance and repair crews.

He joined the Commission April 26, 1951 as a machine operator. He is survived by his wife and three children who live in Belton. ✈

Insurance Policy Exclusion Denies Benefits to Private Aircraft Operator

by Henry M. Burwell

An action was brought in a federal court in Connecticut to collect insurance benefits under a policy that states payment would not be made for loss resulting from air travel unless it was as a passenger making a regularly scheduled flight on a commercial aircraft. In this instance, the insured had intended to pilot a small private plane on a business trip but was killed accidentally while starting his aircraft. *Jurrius v. Maccabees*, DC Conn., 18, 526 (1984).

The facts show that the deceased turned the aircraft's propeller to circulate oil in the engine then started the engine. He then deplaned without switching off the magnetos. He

manually turned the propeller again and the engine started killing him. His wife was paid certain life benefits but was denied any proceeds under the death and disability benefits on the grounds that the planned flight was not a regularly scheduled flight on a commercial aircraft.

The court held that the language of the exclusion was clear and unambiguous. As such, the court determined the policy did not insure the decedent for death or dismemberment because he was in the process of starting to operate a private aircraft. ✈

Mr. Burwell is a partner in the Greenville, S.C. office of the law firm of Barringer, Allen, Pennix & Burwell.

Walterboro Needs FBO

The Walterboro-Colleton County Airport Commission is soliciting applications for a Fixed Base Operator (FBO) at Walterboro Municipal Airport.

The position will be available in late June. Proposals will be accepted through May 31st and should be sent to the Walterboro-Colleton County Airport Commission, P.O. Box 717, Walterboro, SC, 29488.

Interested parties may contact Chris Bickley at 549-2545 for more information. ✈

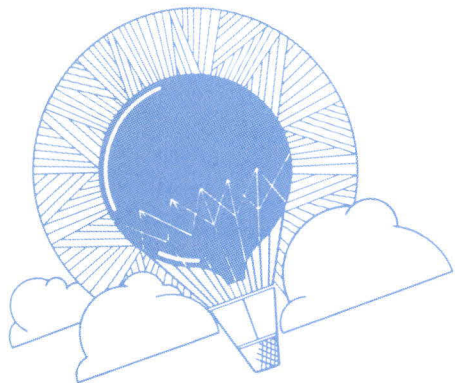
Allendale Wants FBO

The Allendale County Airport Commission is looking for a full-time, full service FBO to offer flight instruction, rental aircraft and fuel sales.

The airport has an existing 3,200 foot paved runway with a 1,800 foot extension now under construction. Plans are to add Medium Intensity Runway Lights, a rotating beacon and VASIs. The airport is three fourths of a mile from the Allendale VOR.

Interested persons contact Travis Mixson, at 632-3021 during the day or 632-2479 during the evening. ✈

Palmetto Balloon Classic May 27



The fifth annual Palmetto Balloon classic set for Memorial Day weekend at Woodward Field in Camden promises to be an exciting three day event with balloon races, a country music concert, fireworks display and an aerobatic air show featuring The Skyhawks.

The activity gets underway Saturday, May 25 at 12 noon and runs through Monday evening, May 27.

There will be five balloon races: Saturday evening, Sunday morning and Sunday evening and Monday morning and evening. Sunday, there will be a key grab race with a \$20,000 grand prize. More than \$12,000 in prizes will be awarded to winners of the other four races.

During the day, there will be a number of activities to provide entertainment including professional performing talent, amusement rides, and a crafts show. Concessions will also be available. Saturday night, there will be a major concert featuring country recording artist Earl Thomas Conoly. A fireworks display will cap the activities Saturday. On Monday, Memorial Day, the Skyhawks air show will begin at 4:30 p.m.

Admission is \$3 per day per person, not including the concert. Group tickets will also be available for those

who may wish to stay for the entire three days. A campground area with water and electricity will be available for those who wish to camp.

The event is sponsored by the Palmetto Balloon Classic Association, an eleemosynary corporation. The proceeds of the classic go to youth oriented charities in Kershaw County. ✈

Breakfast Club



- May 5** Bryant Field,
Rock Hill
- May 19** Eastwinds Airport
- June 2** Berkeley County Airport,
Moncks Corner
- June 16** Clemson-Oconee Airport,
Clemson
- June 30** Woodward Field,
Camden
- July 14** House Movers Field,
Batesburg
- July 28** Daniel Field,
Augusta, Ga.
- Aug. 11** Orangeburg Municipal
Orangeburg
- Aug. 25** Grand Strand Airport,
N. Myrtle Beach
(Don's Pancake House is host)

Aviation School Announces Scholarship Opportunity

North American Institute of Aviation, fixed-based operator of Conway-Horry County Airport at Conway, has announced a valuable scholarship opportunity for qualified students.

Since its foundation in 1972, North American's School of Aviation has gained an international reputation with over five hundred graduates from more than forty countries. This past year North American inaugurated a School of Aviation Maintenance Technology. It is the intention of the administration of North American to award a scholarship to this school to one qualified student in both North and South Carolina.

In announcing the scholarship plan, Douglas W. Beckner, President of North American, remarked that "The value of each scholarship is \$7,400." In order to qualify for the scholarship, applying students must have a 3.0 average in math and science, and be able to evidence this. Financial need must be

demonstrated through the student's submission of his or her family financial data to the College Scholarship Service (CSS) located in Princeton, N.J. The standard for this is available at high schools or from the Financial Aid Administrator at North American.

Pointing out the career opportunities open to graduates of this 13-month, 2020 Clock Hour Program, Beckner noted that "while a student's ultimate success as an airframe and power plant technician depends on the individual student, North American is committed to the task of providing the knowledge and skills which rest at the foundation of one's mastery of this career discipline in the aviation industry." Beckner further noted that "opportunities abound for qualified maintenance technicians, but it all begins with the student's dedication to the rigors of training for this challenging and rewarding career."

Students interested in detailed information on this scholarship opportunity should call or write: North American Institute of Aviation, P.O. Box 680, Conway, S.C. 29526, (397-9111 or 626-3434.) ✈



Conway Unicom changed

Pilots, please note that the UNICOM at Conway-Horry County Airport has been changed from 122.8 to 122.7.

Proper Oil and Lubricants Essential to Smooth E

By Bill Holecek

The other month I talked about winter flying operations. This month, let's talk about oil, oil and more oil.

To set the record straight, let me first say that I do not get a stipend from oil companies such as Shell, Phillips, or WD-40 whose products I like to promote.

In my experience, there has been a lot of misinformation about oil changes and the oil itself. I hope this article will clear up some of the confusion.

First of all, if you do not fly your pride and joy at least five to 10 hours per month, you should pay strict attention to what I am going to cuss and discuss concerning your engine.

In theory and operation your aircraft engine is no different than an automobile engine. I drive a 1967 Mercury Cougar and a 1966 Ford Pickup about 200 combined miles each month. This amounts to about 2500 to 3000 miles per year and is bad news when we consider what problems can arise in an engine from this kind of low mileage. This is similar to the operation of aircraft engines of many of my friends who only fly their aircraft two or three hours per month.

Acid Buildups

Not using your engine often enough causes water and acid buildups internally. Internal combustion engines must be run frequently to eliminate such buildups. Just cranking the engine and running it on the ground is not going to alleviate the moisture and acid problem. It takes prolonged running in flight (or, in the case of a car, on the interstate) at correct operational temperatures to eliminate the contaminants in the oil, particularly the carbon buildup in the cylinder heads!

Therefore, I personally advise changing the oil and filter every three months regardless of time. This also applies to your car, tractor, lawn mower, etc.



If your aircraft has been sitting up for a long time, say six months or a year, then you should change the oil before you fly.

As a side comment, do you notice water coming out of your exhaust tail pipe when you crank up your car? We are in a high humidity area here in the southeast and this creates moisture in your engine and exhaust system. Midas Muffler makes its millions on these same corrosive conditions we are talking about.

All of the above recommendations are directed mainly toward those of us in the so-called sport flying segment of general aviation. What I will now discourse on affects all segments of general aviation, including corporate flying.

In my experience with corporate aviation, the maintenance of pressurized, turbo charged aircraft, has been very harrowing concerning its operational problems.

Good As Sex

Approximately three or four years ago we started using Shell and Phillips multi-grade oils. Man, you must believe me when I say this came close to being as good as sex! We got reports from our customers of lower oil consumption and, best of all, operators did not report manifold pressure and fuel flow fluctuations and various power control problems.

It also eliminated winter starting problems by 100 percent because of lower starting torque.

A word of caution before you charge ahead and start using multi grade oil. If you have been using single weight, non-detergent oil, including Shell W, you should be aware of problems which can arise when you switch.

Multi grade oil will loosen sludge which can restrict oil passages and cause oil regulators to malfunction. It will also deteriorate incompatible engine and propeller seals. The big offender is Shell oil multi grade!

Shell multi grade is formulated mainly from synthetics and this causes the seal deterioration. Shell costs more than Phillips but, in my opinion, it is the highest grade oil you can use.

If I only operated an engine one to 25 hours per month I would use the Phillips. If your operation required 25 to 50 hours I would use the Shell.

In the last five years, there have been changes made by the manufacturers of synthetic oils which have corrected seal leakage. Check with your maintenance facility concerning this and the latest factory bulletins to find out if your engine, and accessories, are correct for using a synthetic oil such as Shell.

Early Aircraft

Okay, now let's talk to those of you who own or fly an early aircraft. Let's say the thirties through the sixties! We might look at the operational conditions a bit differently.

I will discuss the Continentals 65 through 85 and the Lycomings and Franklins in the same area. These engines have been most dependable but they do have their problems. They have always had valve sticking problems, especially the Franklins.

My experience has been to use a very high grade of single weight oil such as 40 or 50 viscosity with ashless dispersant properties.

These aircraft do not operate in an environment which requires high altitude and high and low temperature

Engine Operation

extremes. They fly in mild temperatures and are mostly blue sky or Sunday fun flying, rarely reaching 10,000 feet.

No More Lead

With the advent of higher leaded fuels and the fuels of so-called low lead, we have increased our operation problems by causing spark plug fouling and the unleaded fuels causing valve-seating problems. It is my belief that the oil companies, with the sanction of the federal authorities will *do away* with leaded fuels in the very near future!

Yes, you can believe me that your car using regular gas and your aircraft engine using basically the same fuel is a dinosaur! Regular leaded fuel is **ON THE WAY OUT**.

Therefore, if you are an aficionado of pre 1970 engines in both aircraft and cars, you have a problem! (I am one of those screwballs). The way I look at the problem is, you have two choices. Number one is to convert the seats and valves to accept the unleaded or low lead fuel. This is expensive! I recommend the conversion of these cylinder valve assemblies to the proper seats and valves when you have to overhaul the engine or replace a cylinder. Before this happens, there are some preventive maintenance practices you can do.

In these engines I advocate the adherence to specific maintenance conditions such as frequent oil changes and the cleaning of spark plugs regularly. Clean them every 25 hours or have two sets and swap them every 25 hours.

Mystery Oil

In my experience, I do not know of Lycoming, Franklin, Continental, or P&W approving an oil additive for their engines. The exception is Lycoming's additive for the "H" series engines. With the exception of the Lycoming "H" series, I have had great results with an additive oil called "Marvel Mystery Oil." This additive

corrected many sticking valve problems.

You might not believe this but in the forties and fifties this additive (which we bought in drums) kept Continental and Franklin 65s and 85s running smoothly! I told Bob Russell to try this additive after he complained of intermittent engine miss with his Super Chipmunk. We started using "Marvel Mystery Oil" in Bob's engine and the problem went away. It is an upper valve lubricant corrective and I have found it to be of great value in engines with low operating times such as the two hour or low time acrobatic engines. This is an exception to the no additive rule which the manufacturer adheres to. This is not approved by the manufacturers but this is my experience.

Now, let's talk about the "H" series engine. This engine, in its development, was a DOG! It was nothing but a loser and very costly to its owners. In its inception, both Lycoming and Cessna thought they could get by with a high production engine with parts that really screwed up the development of the engine.

Well, today I am glad to say that the changes to the engine have corrected its major problems. In the last five years this engine has gone through a lot of modifications to improve its reliability. As of this date, the modifications and recommendations by Lycoming will give you the old 0-320 Lycoming reliability which we have expected. A word of caution concerning the 172 and its engine. If the engine has been upgraded to the latest bulletins and specs you have a good longtime aircraft without the attendant engine problems. But before buying one have your maintenance guru check that these mods have been performed. The few bucks you spend for your mechanic to inspect the engine before purchase is cheap insurance against future high costs and high blood pressure problems. This same philosophy for a pre-purchase inspection applies to all aircraft, regardless of their size and model.

Lube it!

Going back to the purpose of this article, which concerns oil and lubricants, you have heard me extoll WD-40! There are other good penetrant lubes on the market such as CRC and Mouse Milk. The reason I extoll WD-40 is it is available everywhere in the Southeast at very low cost. There is no excuse you can give for non availability.

There are so many "C.S." operational problems which are cured with five cents worth of proper lubricants that I become dismayed with what you the owner-operator, have to pay to correct this lack of proper regular maintenance.

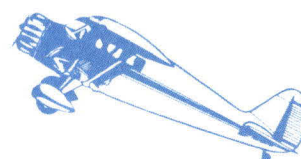
In closing, I would advise you to ask your favorite maintenance facility what they do as far as lubrication of systems and controls during the normal inspection of your aircraft. As a small side comment the most problems with door locks and hinges are due to improper or no lubrication of hinges, locks, and latches, be they aircraft or your car.

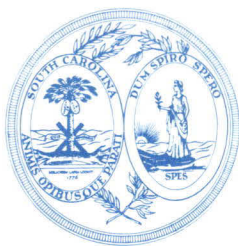
If you have a particular problem please address it to Bill Goodwin in this publication and we will try to help you and others. We appreciate any comments or suggestion. ✈

Sincerely for Safe Flying!
Bill Holecek

P.S.

I am interested in what articles you would like discussed concerning your aircraft, maintenance and operation which we can share with other pilots and operators. Let Bill Goodwin know and we can try to help all aviation buffs that might have the same problem.





**SOUTH CAROLINA
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New charts will be sectionals

When the new South Carolina Aeronautical charts are distributed later this year, pilots will notice a difference. The chart, which has been a WAC scale map for several years, will be changed to the larger sectional scale and will show more landmarks and ground detail.

The change was voted last month by the Commission after a random survey of pilots showed nearly 80 percent preferred the sectional scale.

The Commission mailed some 1200 survey

cards to randomly selected pilots in the state and asked them to pick the type of chart they preferred. When the responses were tallied, 298 cards were returned and 232, or 78 percent said they liked the sectional map. Fifty-nine preferred the WAC (20 percent) and 7 (2 percent) had no opinion either way.

The Aeronautics Commission thanks those who responded to the survey and, to those who took time to jot down comments, we appreciate your input. ✈